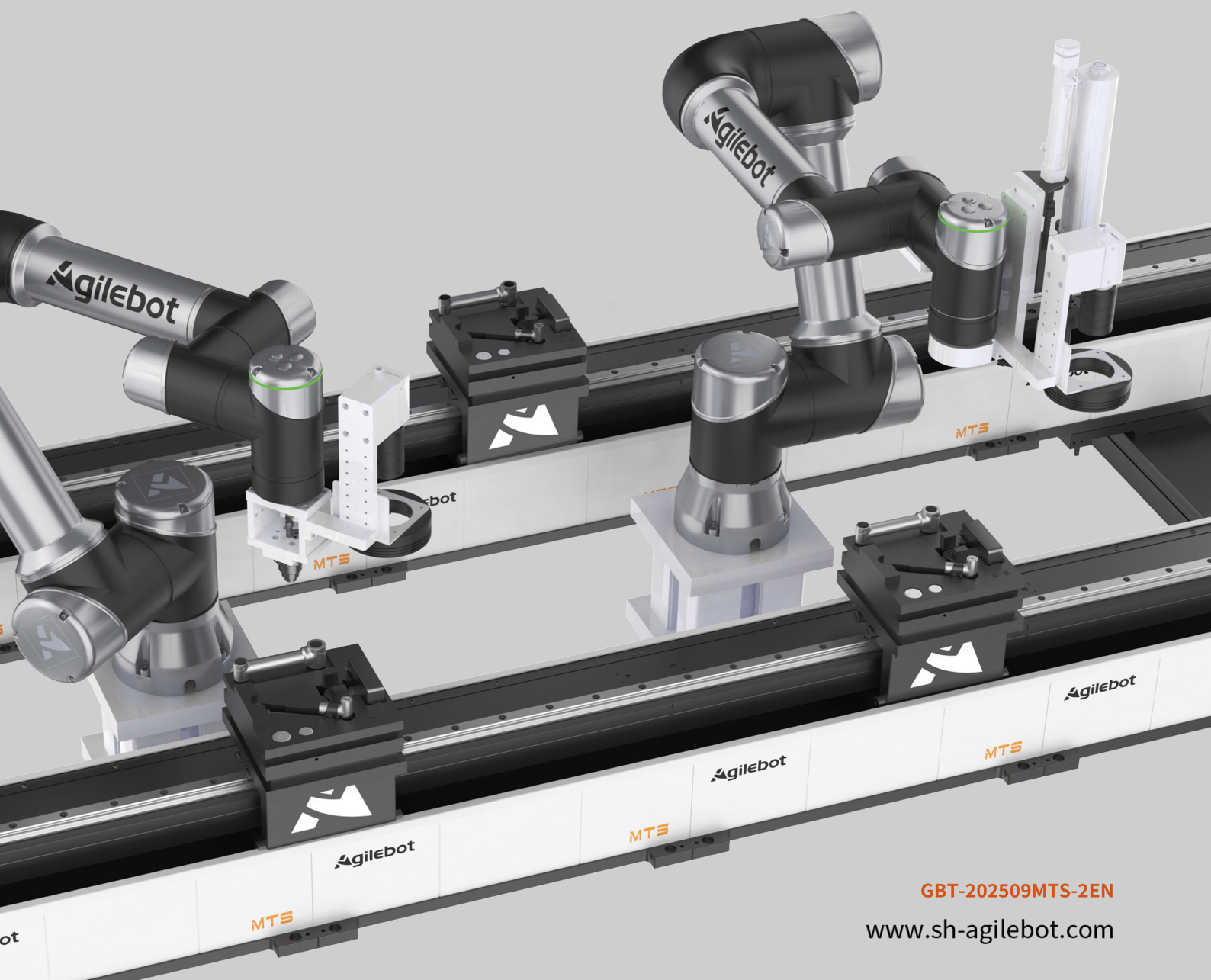


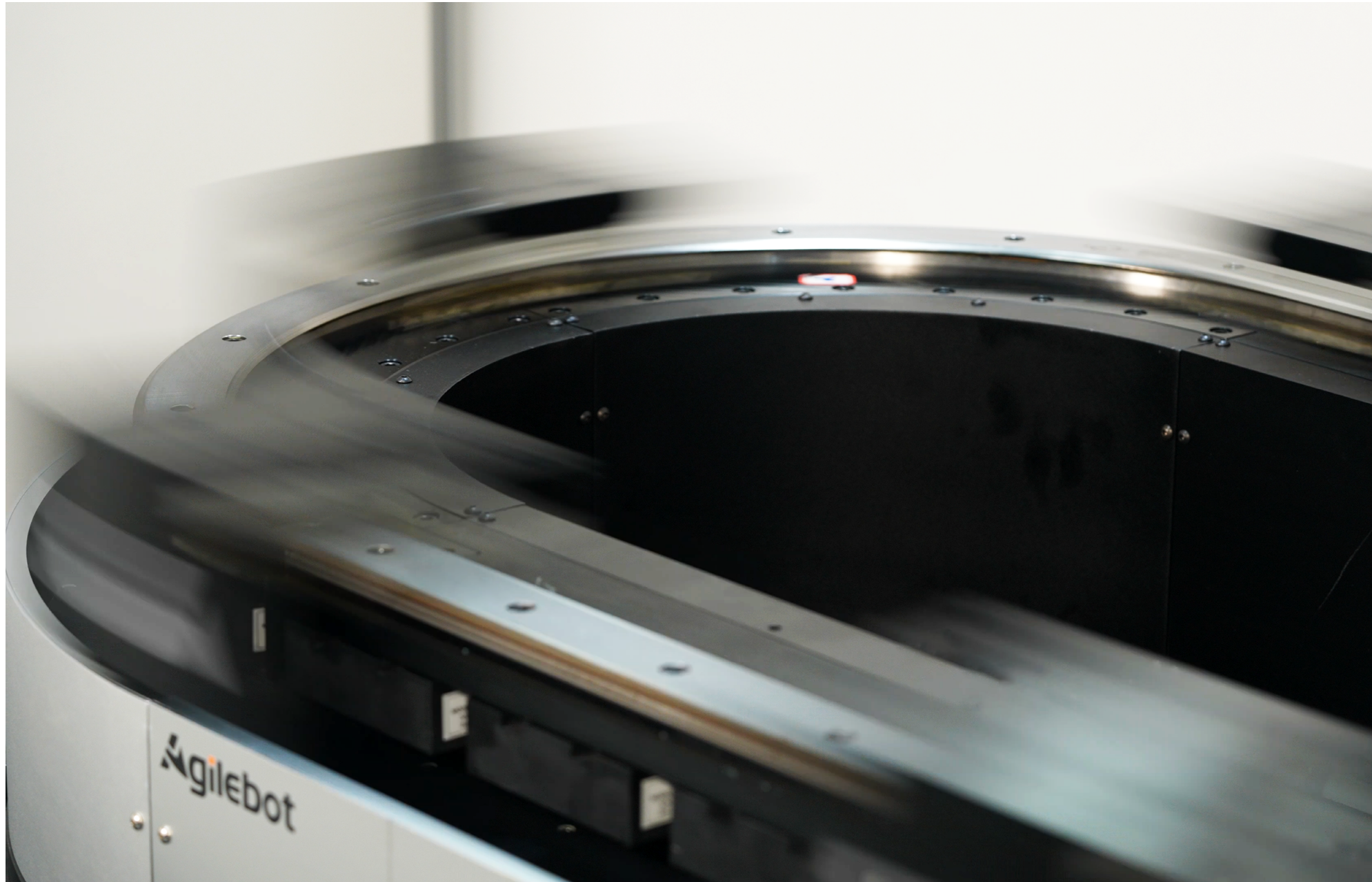
DRIVE THE FACTORIES OF THE FUTURE



GBT-202509MTS-2EN

www.sh-agilebot.com

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ABOUT AGILEBOT

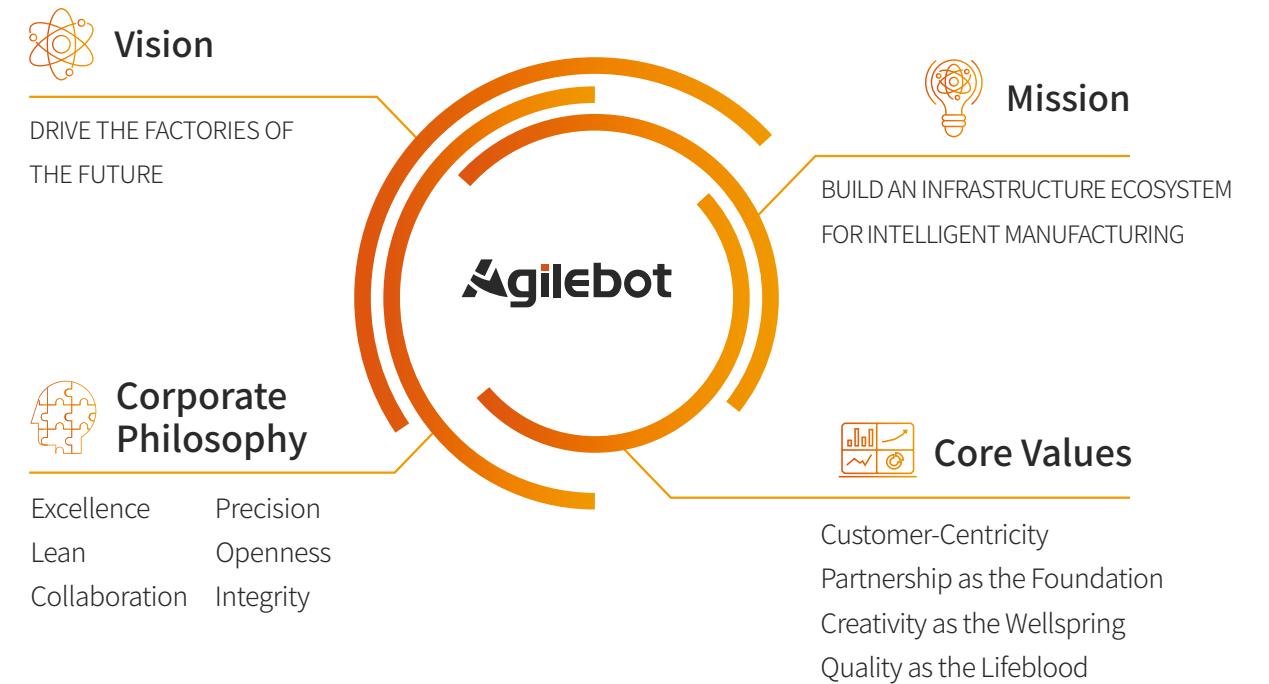


Agilebot Robotics Co., Ltd. is a professional provider of Industrial Robotics (IR) and intelligent Magnetic Transport System (MTS). With a vision of driving the factories of the future, and a mission to build an infrastructure ecosystem for intelligent manufacturing, we are dedicated to pushing the boundaries through the seamless integration of cutting-edge technologies. Our expertise spans motion control, motor control, communication systems, sensor technology, and intelligent algorithms, all meticulously fused into our line of IR and MTS products. We focus on the deep-rooted industry application of these technologies, progressively diversifying, specializing, and nurturing an ecosystem of technological platforms and end products that deliver multifaceted values to our clients.

At Agilebot, we have built a comprehensive infrastructure for manufacturing, testing, and traceability. This commitment to excellence, driven by continuous process innovation and elevated management standards, ensures the prime quality of our products. Beyond developing a wide range of robot categories, MTS and functional software, we extend our commitment to clients through services like training, maintenance, technical support, and solution consulting.

Backed by our advanced Integrated Motion Control technology, Agilebot places independent R&D and control of key technology at the core of our growth approach, with a dedication to fundamentally satisfying market demands as our guiding principle. Our unwavering goal is to consistently provide clients with high performance, top-quality, cost-effective, and user-friendly products that empower their industrial operations.

Our Values



Our Business

Multiple Configuration Robots and Functional Software Packages

MTS (Magnetic Transport System)

Technical Support and Training Services

Consultation on Technical Solutions

Magnetic Transportation System

Utilizing linear motor drive technology, the system generates driving force through the electromagnetic coupling between the coil windings and the permanent magnet mover, achieving independent servo control of multiple load-bearing pallets on a linear track. Each mover unit can achieve precise positioning and independent control, forming a modular intelligent conveying solution for factory automation scenarios.

- All core components self-developed
- Max. speed: 3 m/s
Repeatability: ≤ 0.02 mm
- Efficient, streamlined, flexible
Next-generation conveying solution



Product Advantages



Efficiency:

- High-speed conveying
- Fast dynamic response
- Improved production cycle time



Simplicity

- Compact structure, no extra hardware required
- Flexible design, space-saving
- Easy application, quick commissioning
- User-friendly interface, intuitive operation



Flexibility

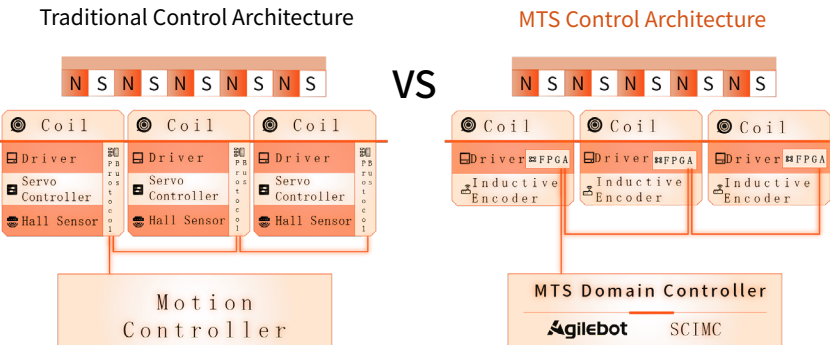
- Modular assembly
- Unlimited hardware expansion
- Flexible layout
- Adaptable to multi-variety, small-batch production

- **Intelligent control, meeting digital and smart production line design needs.**
- **Modular products, enabling simple and fast line design.**
- **Conveying speed up to 3 m/s, significantly improving efficiency over traditional methods.**
- **Software-based control, start/stop at any position without stoppers, with flexible adjustment.**
- **High-precision positioning, supporting various in-line processing requirements.**
- **Easy hardware reuse and fast software adaptation for line upgrades and retrofits.**
- **Compatible with all production line layouts, unlimited system scalability.**

Product Features

SCIMC Control Architecture

Optimize system architecture to save hardware costs.
Achieve overall high-efficiency and high-real-time control of the system.



Rotary Inductor Encoding



Planar Inductor Encoding



Planar Inductive Encoder

A more stable inductive encoder system solution. Leveraging robot product technology experience, Agilebot has independently developed the application of inductive encoders in MTS systems.

User-Friendly Software

No-Programming Software for Debugging and Operation, leveraging collaborative robot industry experience, integrating user-friendly features such as graphical programming and drag-and-drop teaching.



Product Applications

Industries



Consumer Electronics



EV Battery



Medical & Healthcare



Food & Packaging



Semiconductor



Automotive Electronics

Process



Tightening



Press Fitting



Gluing



Vision Inspection



Marking



Welding

Product Naming Rules

Product Model Description:

Product Types		Product Series		Standard Module Internal Coil
MTS	Magnetic Transport System	MF	Transfer Track Module Products	4
		MC	Circular Track Module Products	Coil Quantity:4
		MH	Hybrid Module Products	

MTS MF 4LA

MTS MC 4LA

Stator Model Description

Stator		Stator Type		Stator Length
S/Blank	Represents Stator	L	Linear Type	480
		C	Arc-Shaped Type	480mm

Structure		Branch Version	
Blank	Standard Structure	Blank	Standard Product
N	Vertical Fit Structure		Protective Module
S	Planar Fit Structure		Wireless Power Module

MTS MF 4MA L480

Mover Model Description

Mover		Mover Length Specification	
M	Represents Mover	160	160mm 动子

Precision		Structure	
H1	±0.01mm	Blank	Standard Structure
Blank	±0.02mm	N	Vertical Mating Structure
H3	±0.03mm	S	Planar Fit Structure

MTS MF 4MA M 160

Stator Module



Stator Module Parameters	
Specifications	L240/L480/C90/C180
Position detection	Absolute value
Working voltage	DC48V
Temperature range	0°C -40°C
Humidity range	5%-95%RH no-condensing

Mover Module



Mover Module Parameters	
Specifications	1L/2L
Max. Speed	3m/s
Max. Thrust	230N/460N

Transfer Track Series

Applicable Scenarios: Moderate speed, medium-to-high thrust and load.

Product Features:

- Faster transport speed, higher positioning accuracy, improving overall production cycle and product yield.
- Compatible with hybrid use of high-speed chains, synchronous belts, etc., reducing investment cost and achieving optimal balance between cost and performance.
- Horizontal and vertical connections allow flexible layout planning according to process and space requirements, minimizing footprint.
- Customizable according to customer requirements.

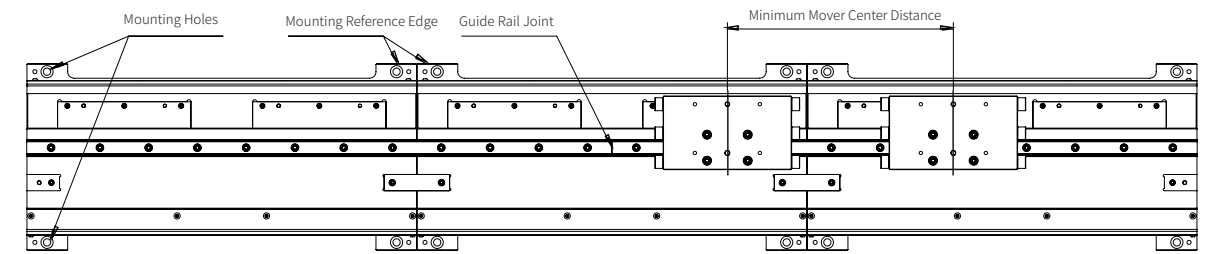
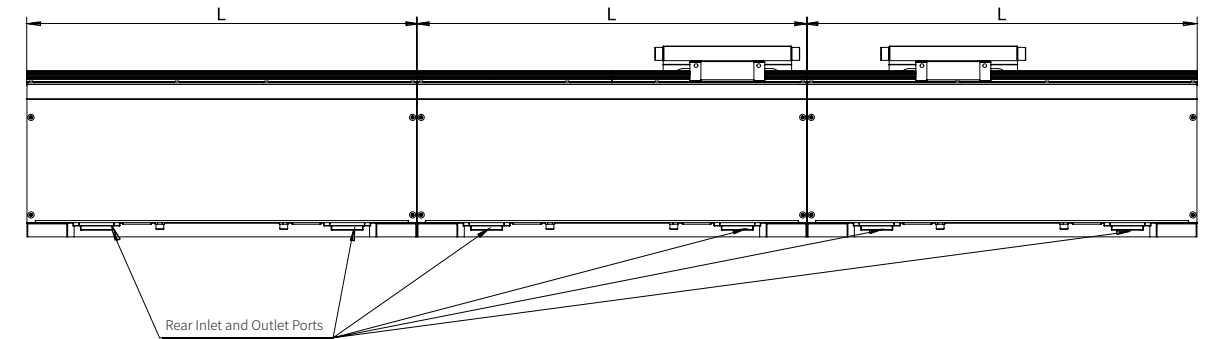
Horizontal Transfer Track



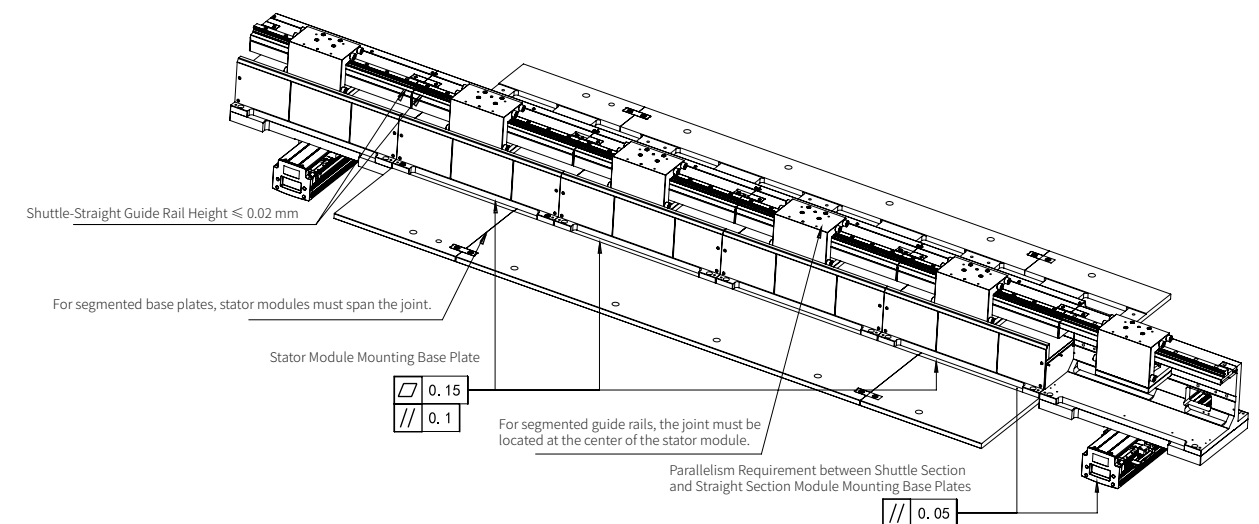
Vertical Transfer Track



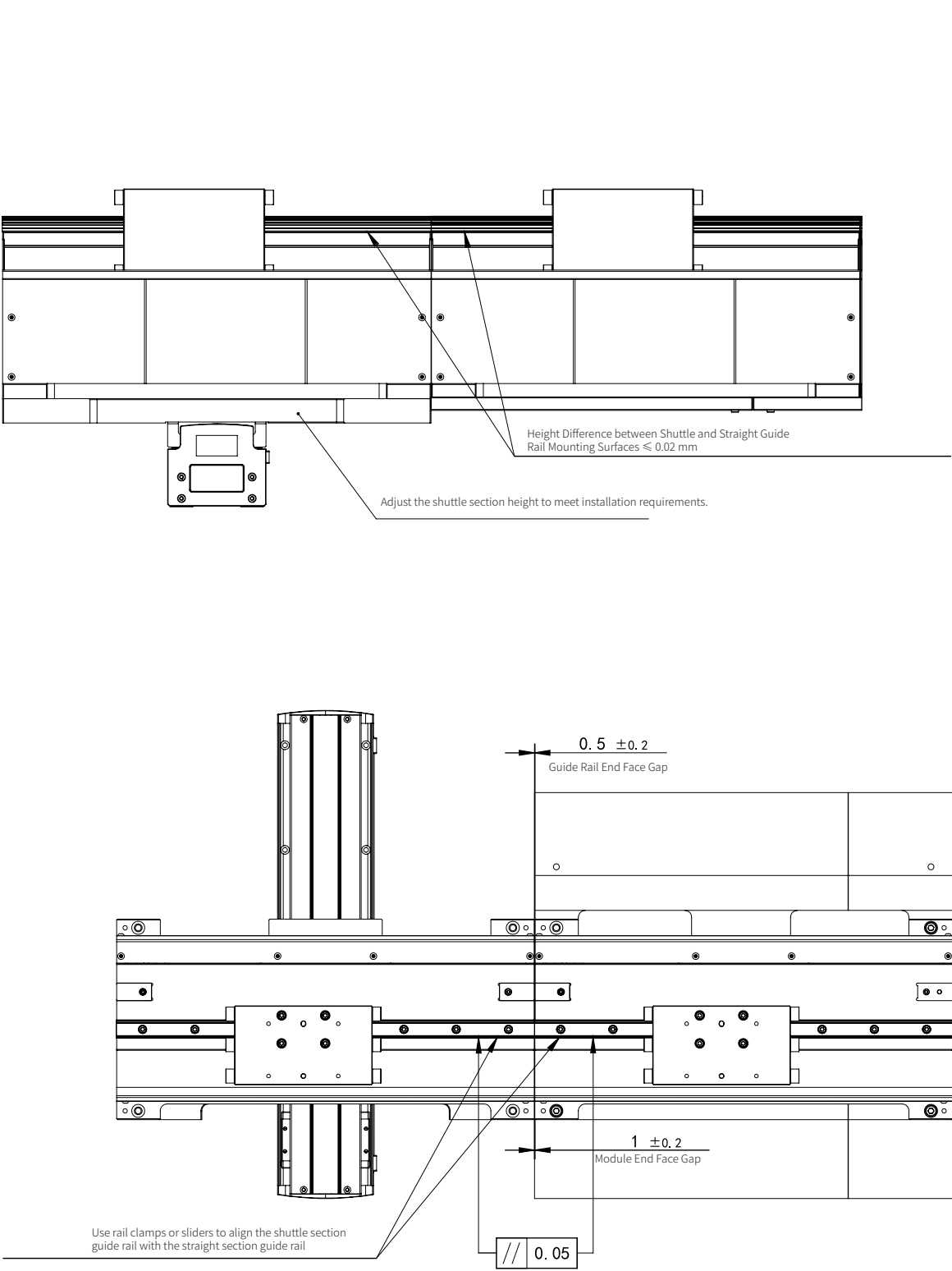
Transfer Track Product Installation Diagram



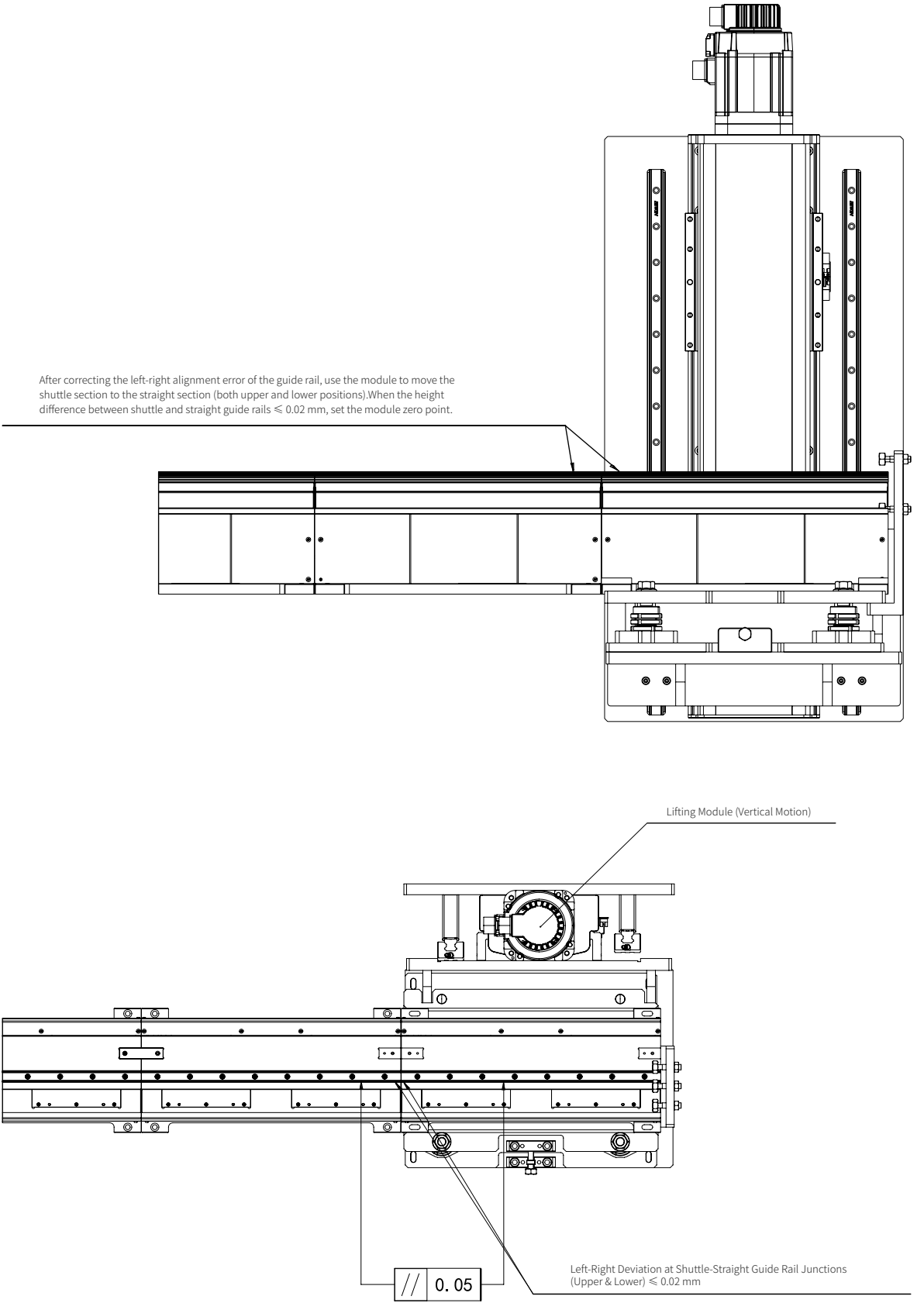
Transfer Track Table Installation Requirements



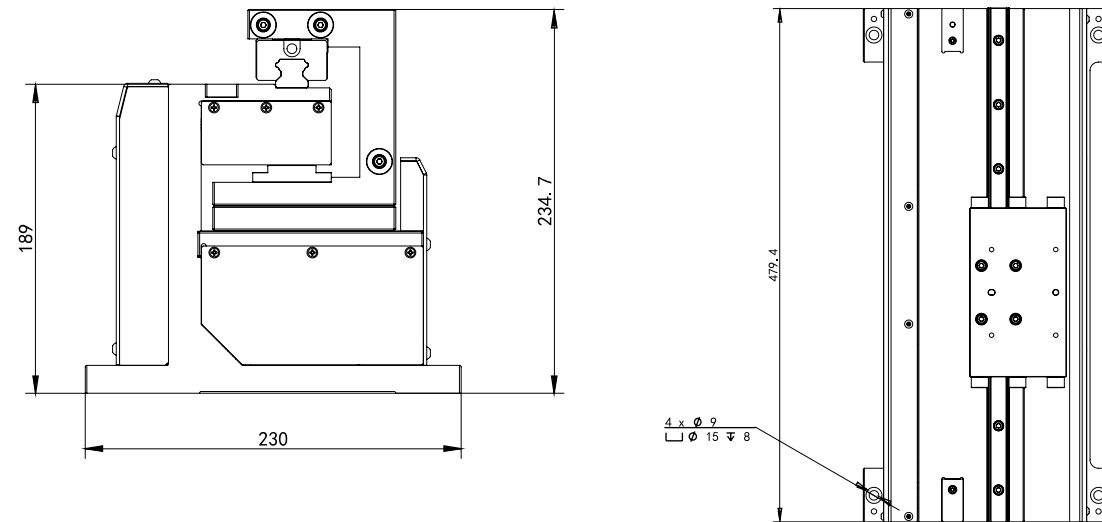
Transfer Track Planar Shuttle Installation Accuracy Requirements



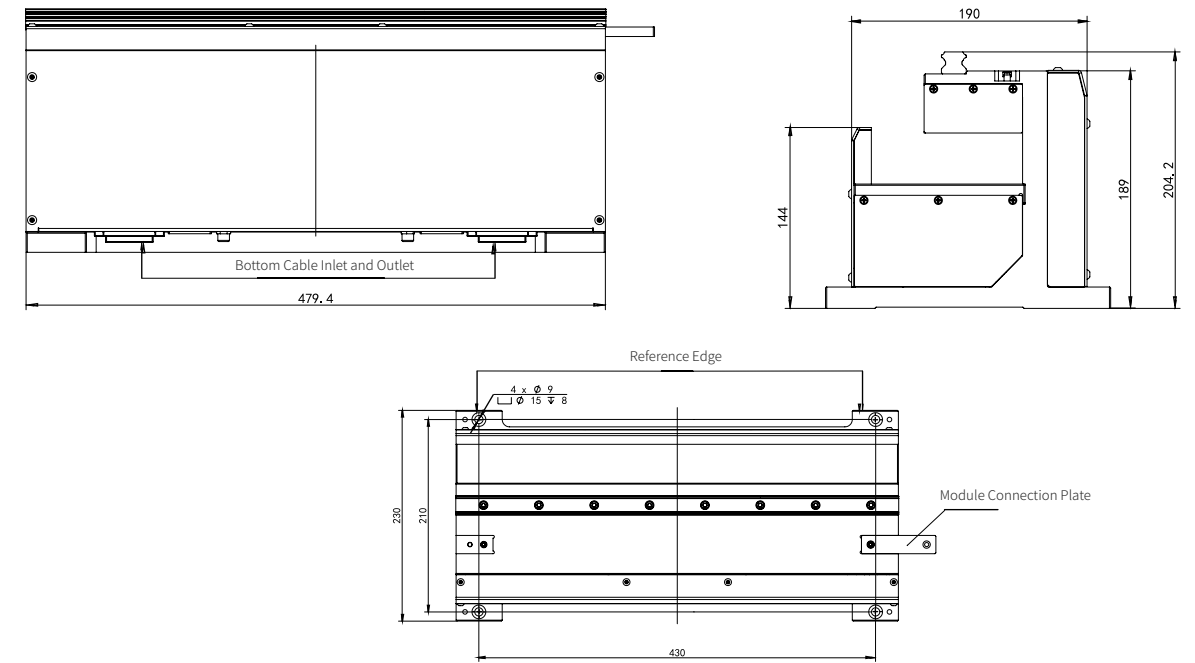
Transfer Track Vertical Shuttle Accuracy Requirements



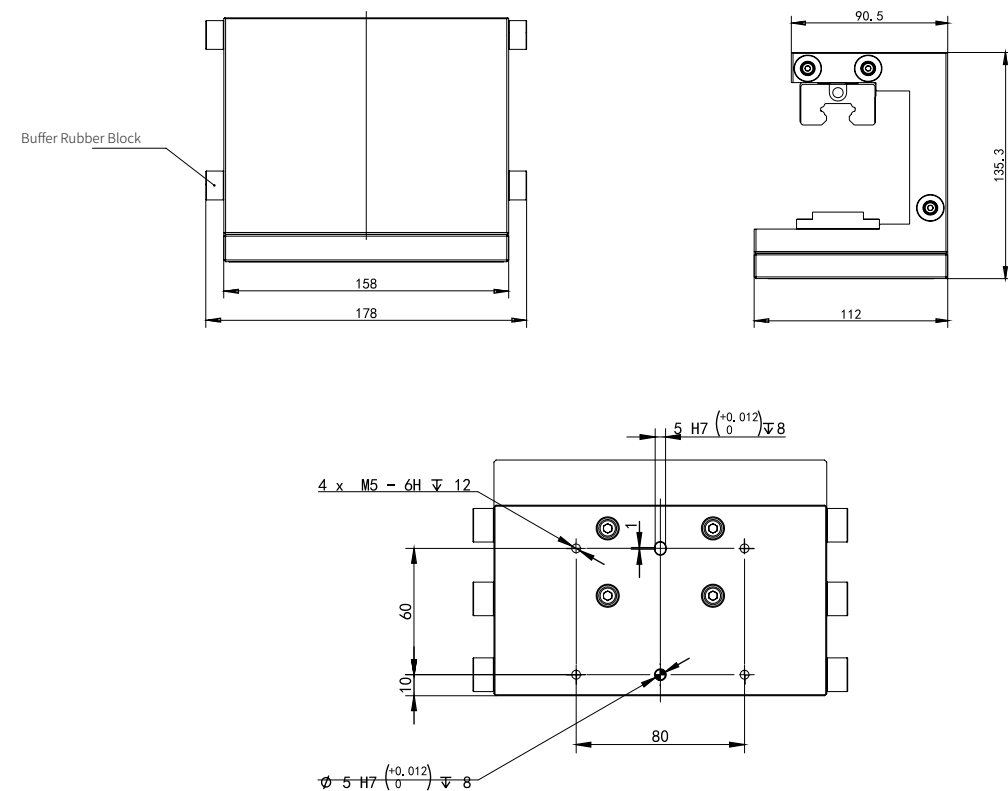
Transfer Track Mover-Stator Assembly Outline Dimension Diagram



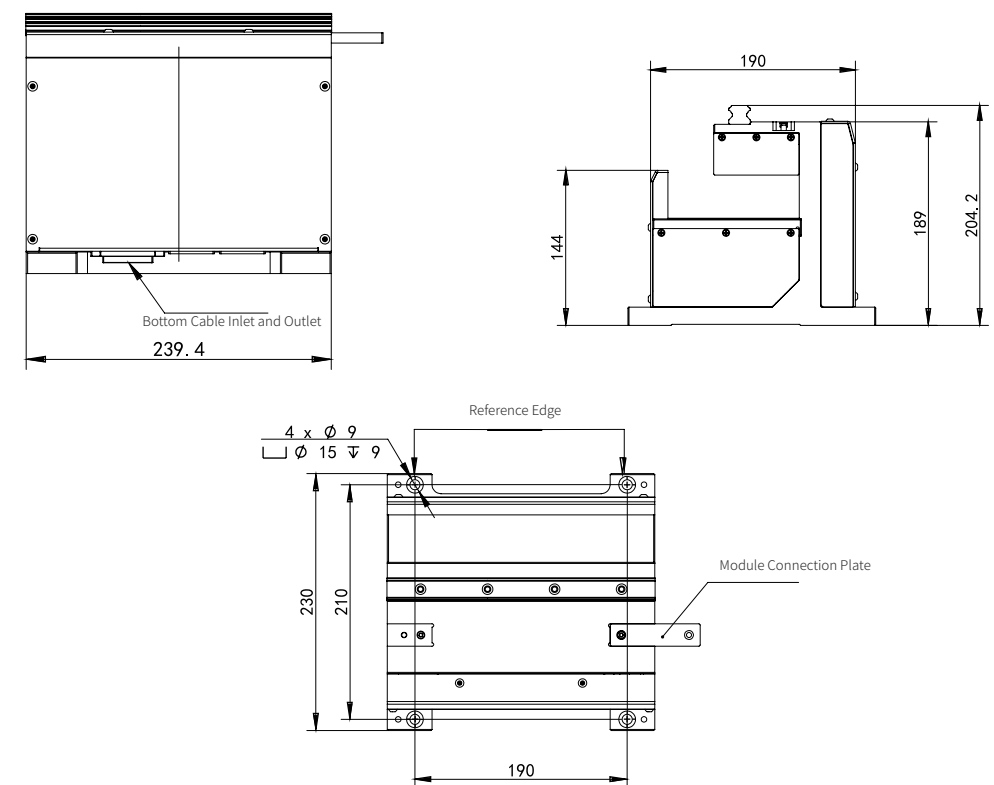
Transfer Track Stator Outline Dimension Diagram – 480 mm



Transfer Track Mover Outline Dimension Diagram



Transfer Track Stator Outline Dimension Diagram – 240 mm





Circular Track Series

Applicable Scenarios: Higher speed, medium-to-low thrust and load.

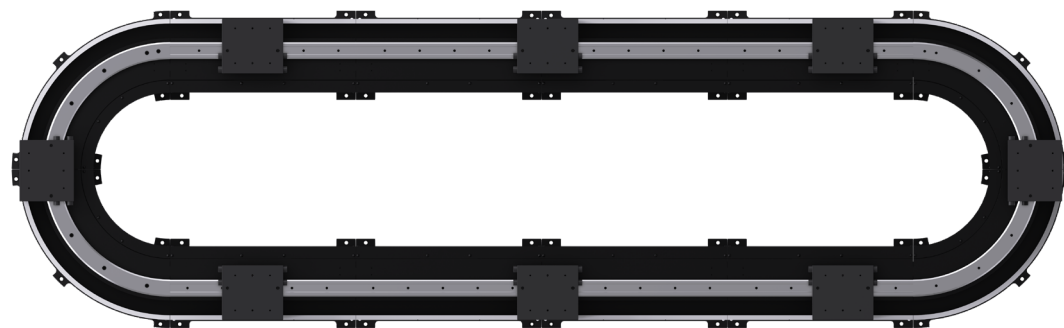
Product Features:

Equipped with arc-shaped modules to form circular paths.

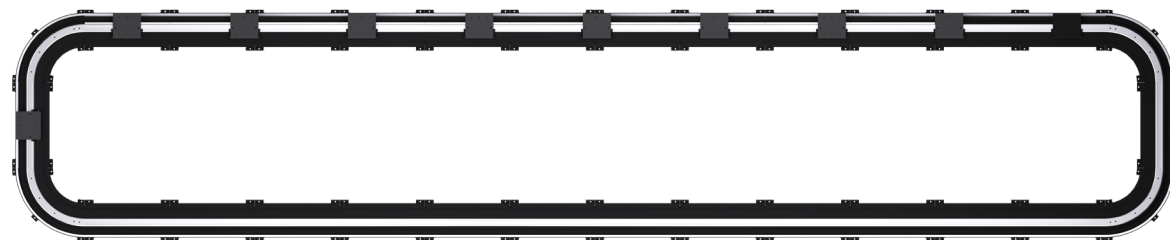
Can be designed in various forms, including circular and shuttle types.

Forces counteract each other for balanced load; rollers and guides bear no extra stress. External guide placement better meets cleanliness requirements.

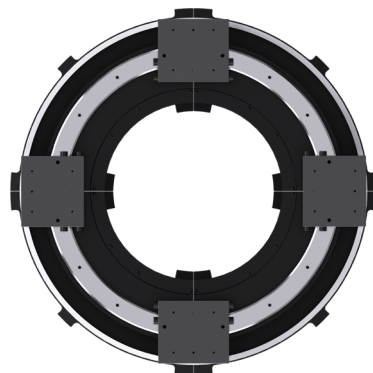
Standard Circular Track



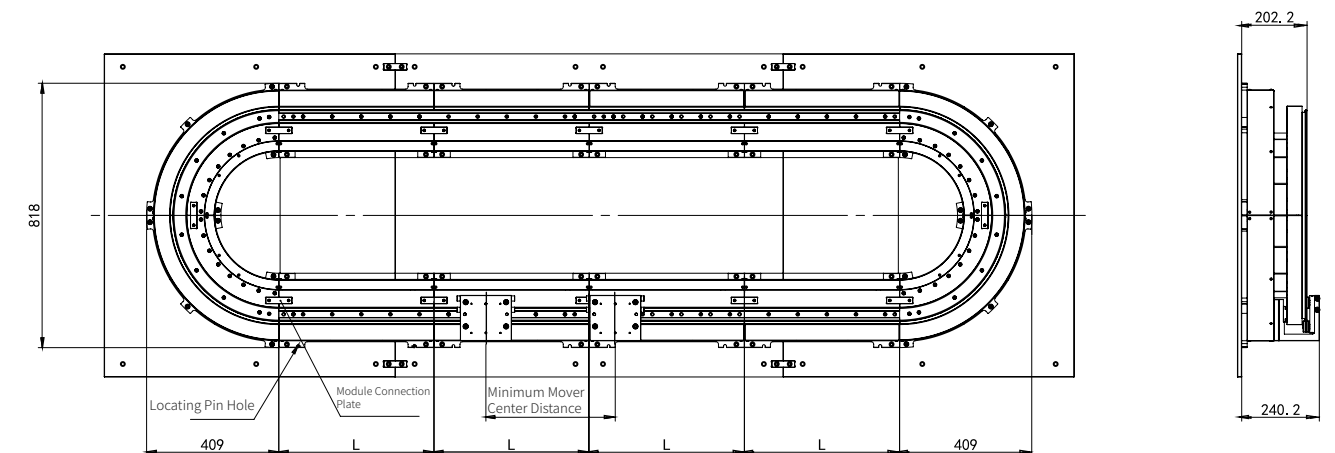
Rectangular Track



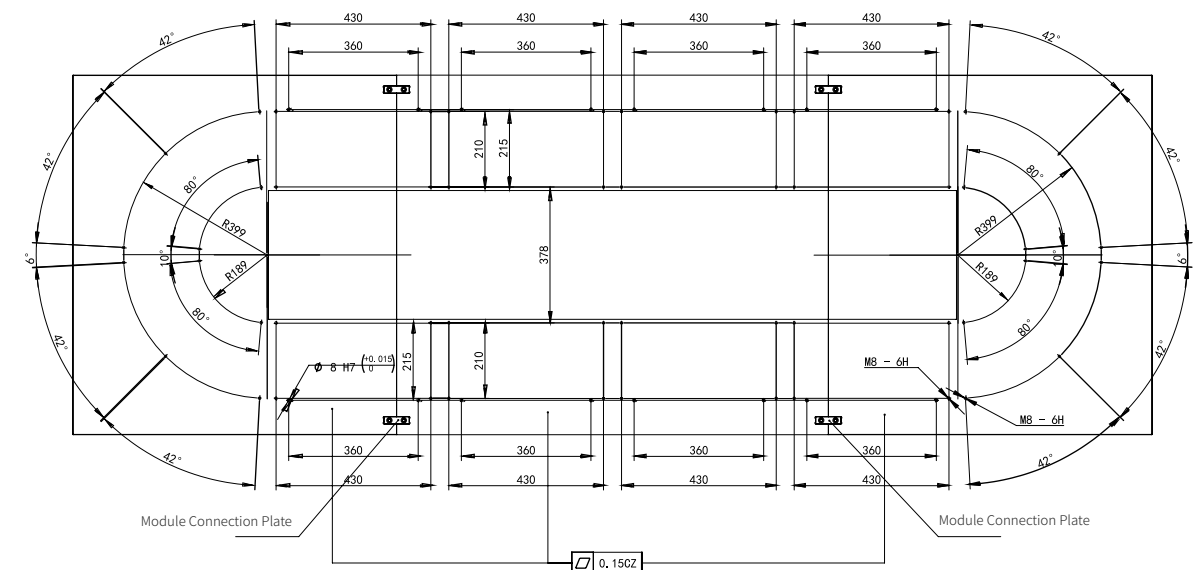
Circular Track



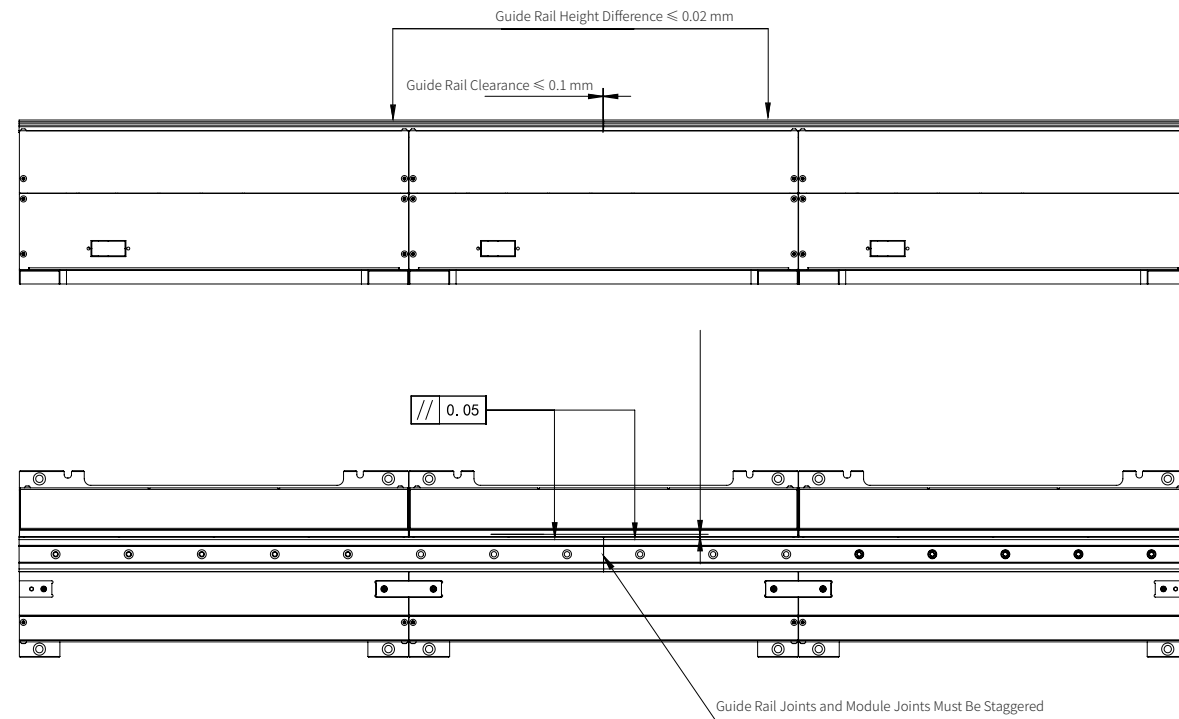
Circular Track Product Installation Diagram



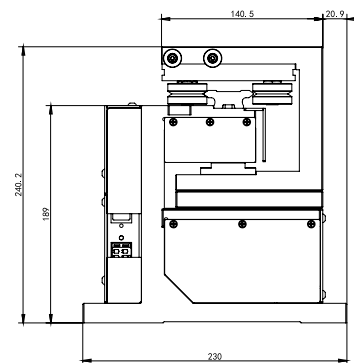
Circular Track Base Plate Hole Layout Diagram



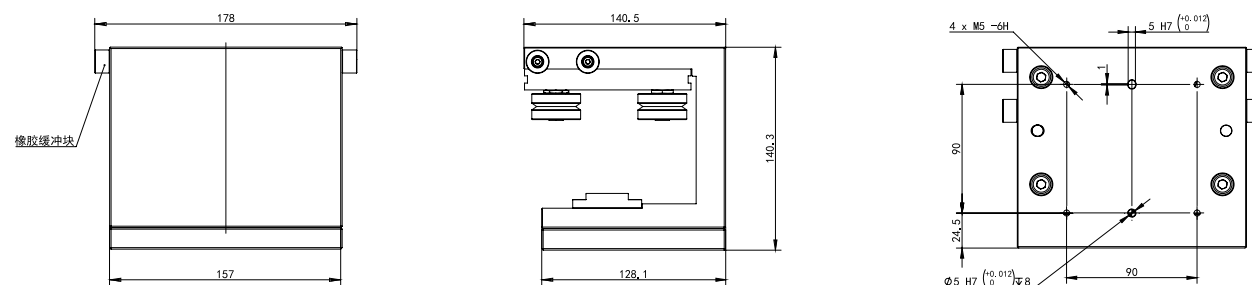
Precision Requirements for Circular Track



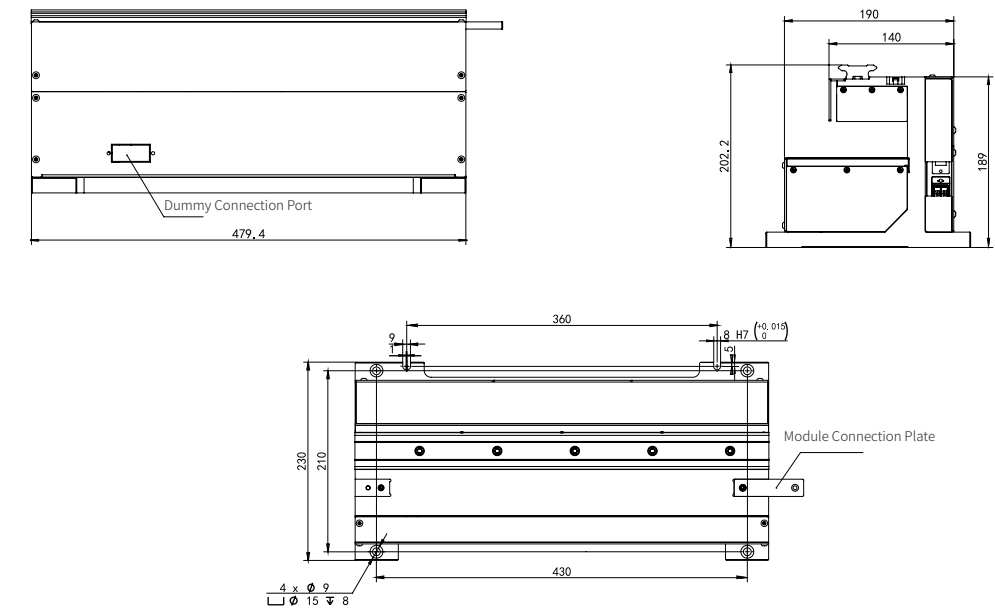
Assembly Outline Dimensions of Circular Track Stator & Rotor



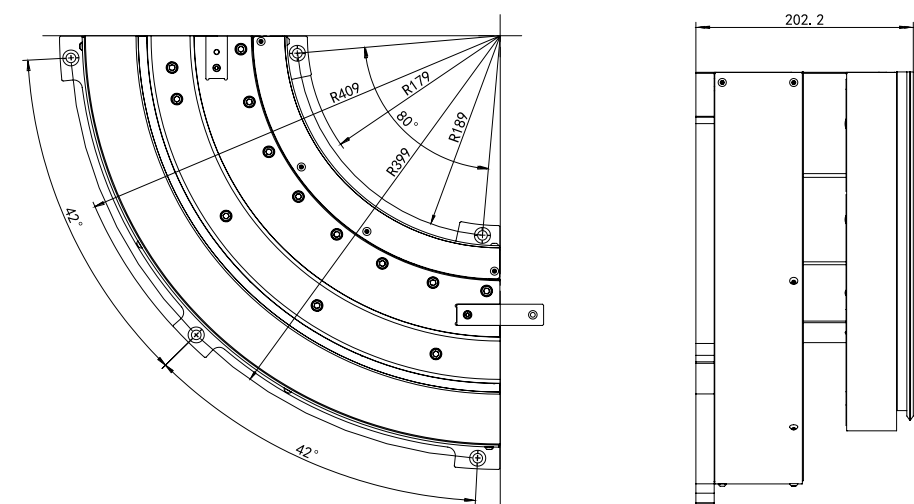
Circular Track Mover Outline Dimension Diagram



Circular Track Stator Outline Dimension Diagram – Straight Section



Circular Track Stator Outline Dimension Diagram – Arc Section



More Product Series

MTS products provide flexible solutions tailored to customer requirements, including customizable hardware structures and software functions.

Dual-Rail Products

Application Scenarios

High-load, High-thrust Applications

Product Features

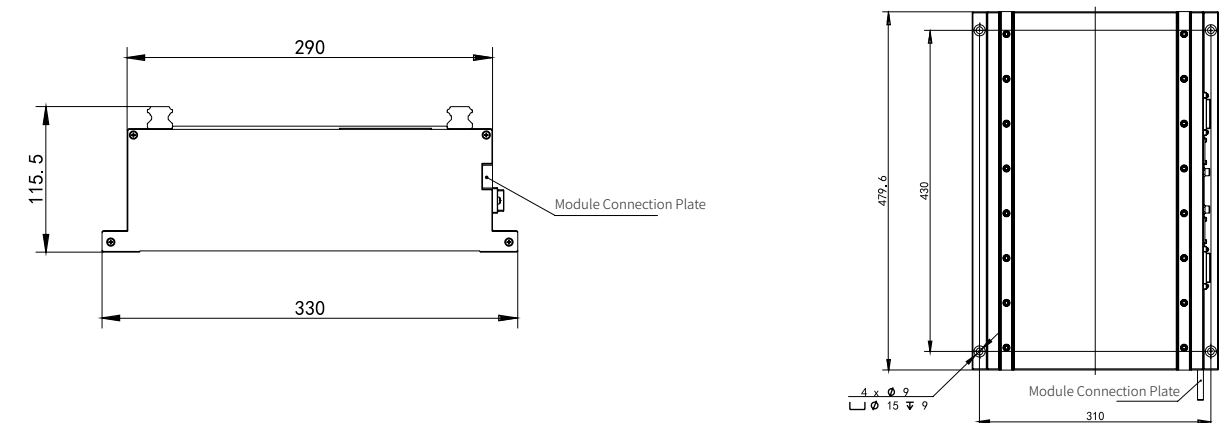
High speed

High precision

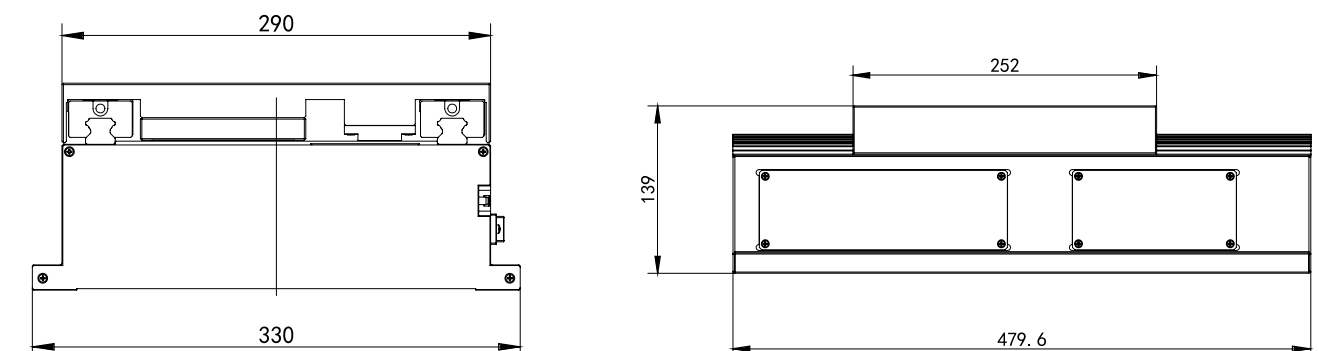
High load, large pallet capacity



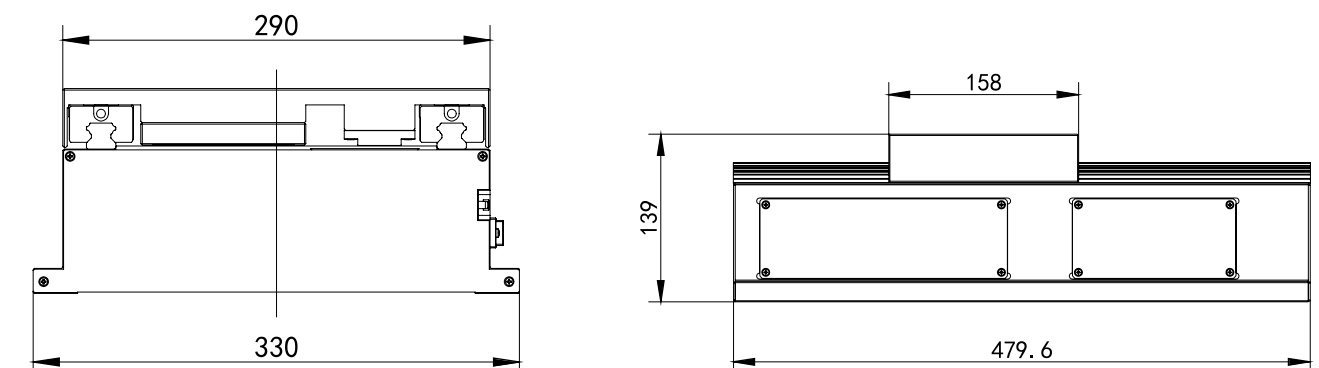
Stator Outline Dimensions



Stator + 240 mm Rotor Outline Dimensions

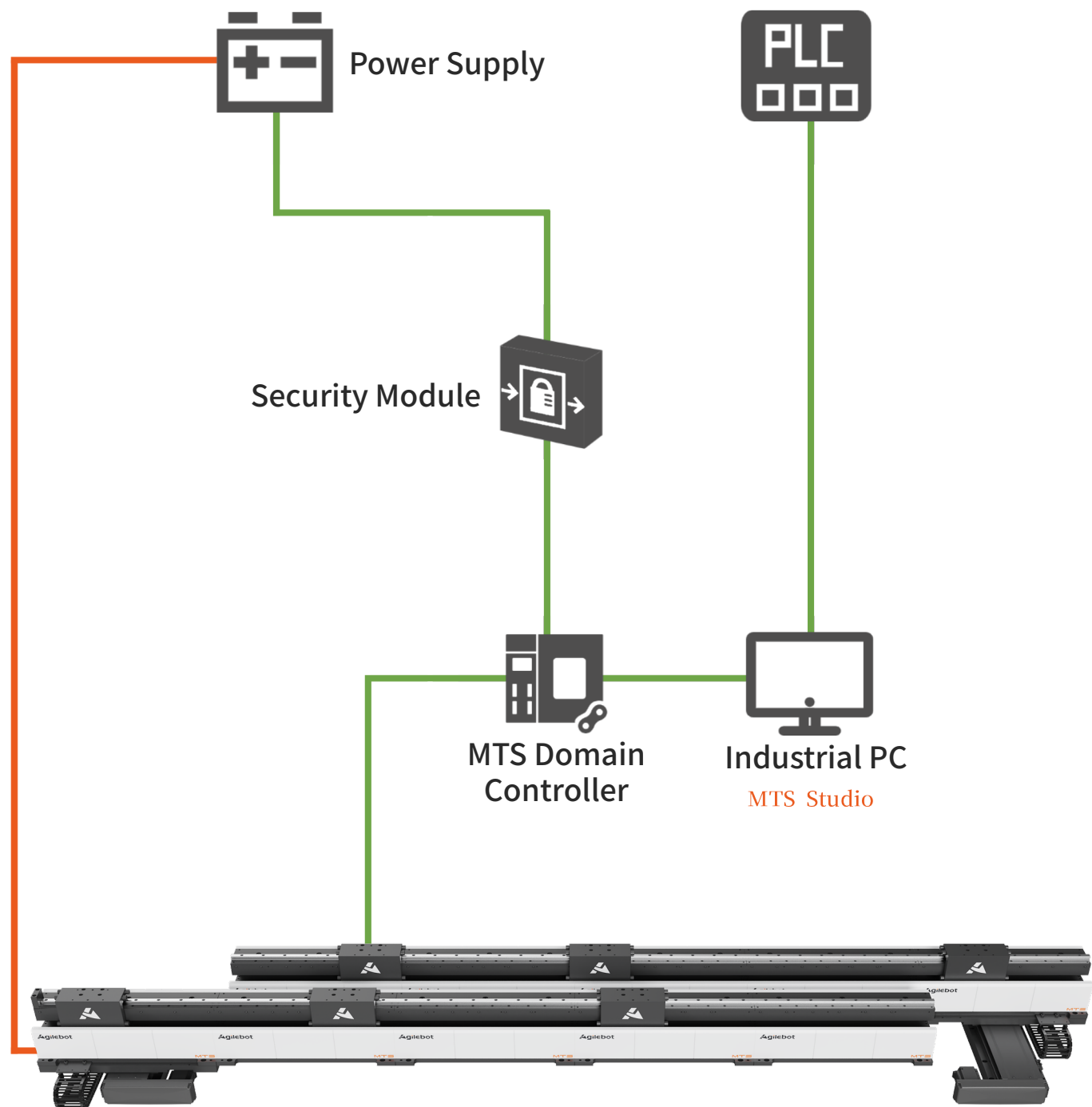


Stator + 120 mm Rotor Outline Dimensions



The specifications are subject to change without prior notice.

MTS Architecture



MTS Domain Controller



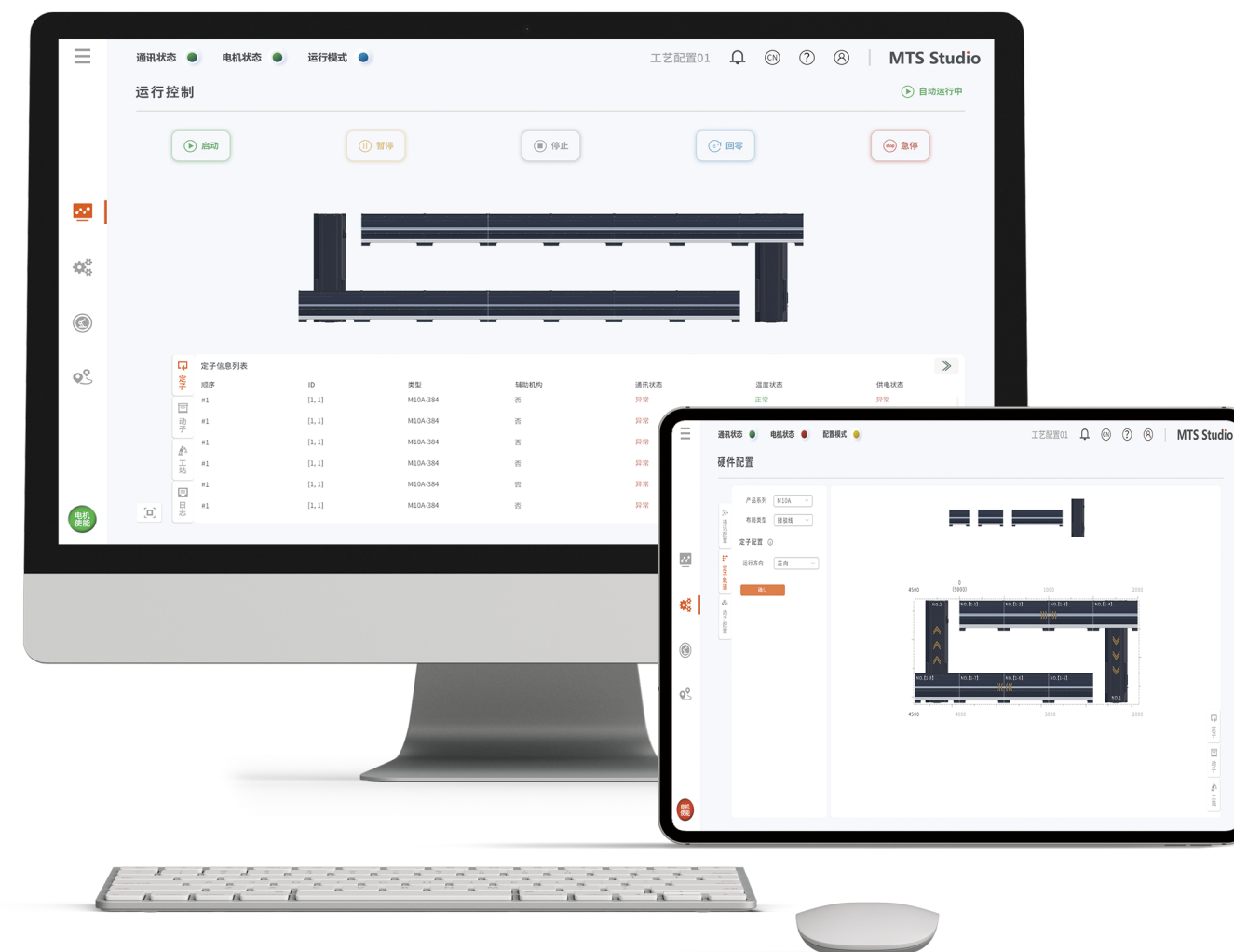
MTS Domain Controller Specification	
Size	190mm*125mm*33mm
Communication	Modbus/TCP
Voltage	DC24V
Temperature	0°C -40°C
Humidity	5%-95%RH no-condensing

MTS Studio

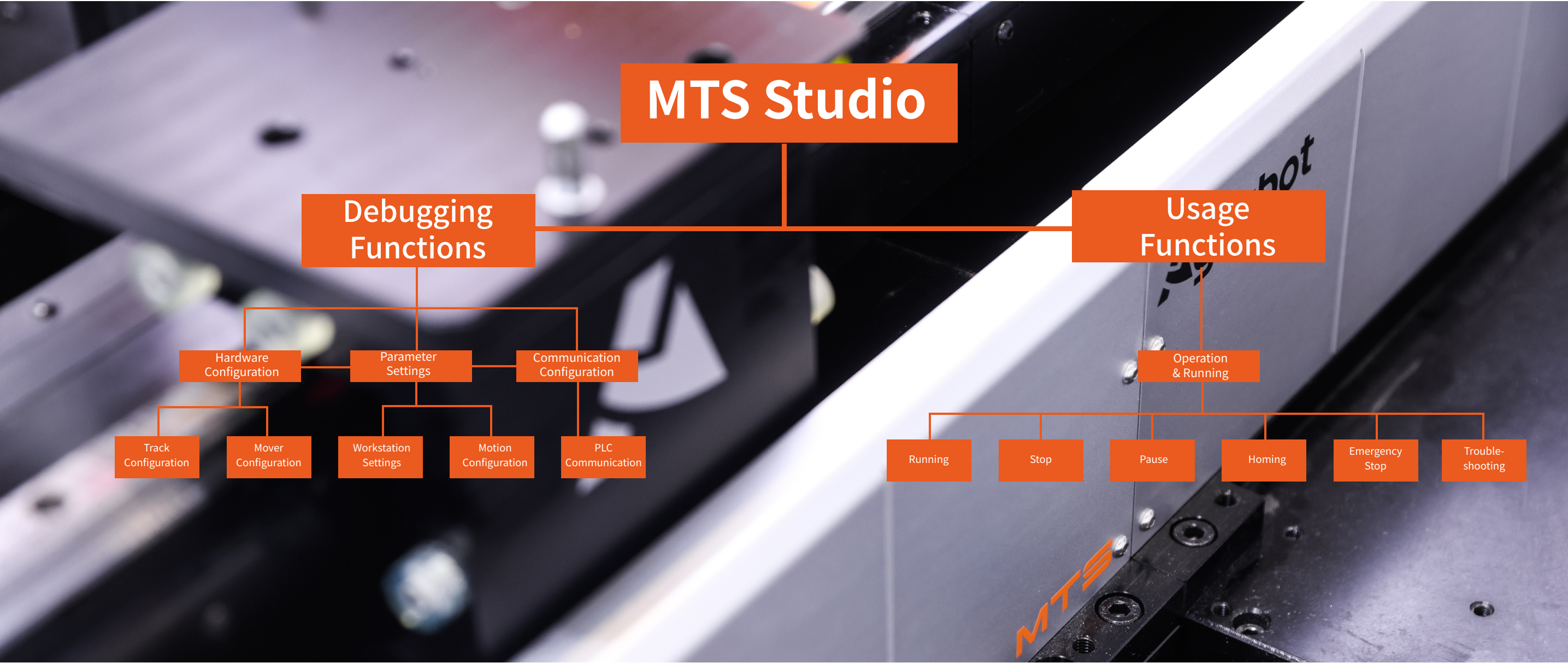
MTS Studio is an integrated software for MTS product commissioning and operation.

- Graphical Configuration Tool: Quickly set up, configure, and commission engineering projects.
- Digital Twin Mapping: Implement system work status mapping through digital twins for convenient process management and data analysis.
- Intuitive Interaction: No need of professional programming languages.
- Wizard Design: Significantly reduces the learning threshold and cost.

System Interface



Functions and Advantages



Core Control & Execution

- **Flexible parameter configuration:** Speed and acceleration configurable as needed
- **Precise path planning:** Algorithm-based planning for high efficiency and low energy consumption
- **Bidirectional external interaction:** Two-way communication for accurate coordination

Data Analysis & Optimization

- **In-depth data analysis:** Automatically collect and analyze operational data, generating reports

Status Monitoring & Safety Assurance

- **Real-time operation monitoring:** Dynamic visualization of key data (position, speed)
- **Motion process simulation:** Simulate and verify before deployment, reducing trial-and-error
- **Intelligent fault warning:** Real-time monitoring with instant anomaly alerts

System Management & Expansion

- **Unified configuration management:** Efficient coordination between software and hardware
- **Open expansion & development:** API support for secondary/custom development

COMPLETE PORTFOLIO



SCARA Series

S3A series Payload: 3kg
 S6A series Payload: 6kg
 S10A series Payload: 10kg
 S20A series Payload: 20kg

PUMA Series

P7B series Payload: 7kg
 P20A series Payload: 20kg

Cobot Series

C5A Payload: 5kg
 C7A Payload: 7kg
 C12A Payload: 12kg
 C16A Payload: 16kg

BUILD AN INFRASTRUCTURE ECOSYSTEM FOR INTELLIGENT MANUFACTURING

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